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## WHAT IS CLAIMED IS:

1. A disposable diaper comprising:

a liquid-pervious topsheet;

5 a liquid-impervious backsheet;

a liquid-absorbent core covered with an absorbent and  
diffusive sheet and disposed between said topsheet and said  
backsheet;

10 said core being formed on a side of said topsheet with  
at least one groove depressed in a direction from a side of said  
topsheet toward a side of said backsheet and said groove has  
a bottom and side walls both covered with said topsheet;

said core containing water-absorbent fibers and  
superabsorbent polymer particles; and

15 said water-absorbent fibers and superabsorbent polymer  
particles being partially disposed between said topsheet and  
said backsheet along said bottom of said groove.

2. The disposable diaper according to Claim 1, wherein said  
20 superabsorbent polymer particles are joined integrally with the  
absorbent and diffusive sheet covering said core along said  
bottom and side walls of said groove.

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3. The disposable diaper according to Claim 1, wherein said absorbent and diffusive sheet is joined to said topsheet along said bottom and side walls of said groove by means of adhesive.

5 4. The disposable diaper according to Claim 1, wherein said water-absorbent fibers form a thin layer having a density higher than that of said water-absorbent fibers around a depth of said core and being in close contact with said absorbent and diffusive sheet.

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5. The disposable diaper according to Claims 1, wherein said water-absorbent fibers are fluff pulp fibers.

6. The disposable diaper according to Claim 1, wherein a  
15 distribution density of said superabsorbent polymer particles gradually increases in a thickness direction of said core from said topsheet toward said backsheet.

7. The disposable diaper according to Claim 1, wherein said  
20 disposable diaper has a front waist region, a rear waist region and a crotch region extending between these two waist regions and wherein said groove extends in a longitudinal direction of said diaper.

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8. The disposable diaper according to Claim 7, wherein said crotch region is formed along a transversely opposite side edge portions thereof with said grooves, respectively, extending in said longitudinal direction in parallel to each other.

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9. The disposable diaper according to Claim 8, wherein a distribution density of said superabsorbent polymer particles in said core is higher between said grooves extending in parallel to each other than outside said grooves.